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CATALOGUE OF THE EXAMPLES OF METEORITIC FALLS IN IRISH MUSEUMS.

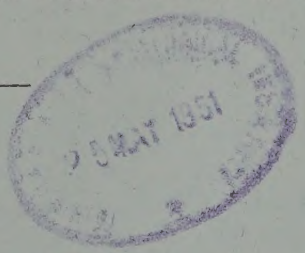
By HENRY J. SEYMOUR, B.Sc., B.A., M.R.I.A.

No. 15. MARCH, 1951

AWARD OF THE BOYLE MEDAL

To PROFESSOR E. J. SHEEHY, D.Sc., F.R.C.Sc.I.

REPORT OF THE COMMITTEE OF SCIENCE AND ITS INDUSTRIAL APPLICATIONS



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CATALOGUE OF THE EXAMPLES OF METEORITIC FALLS IN IRISH MUSEUMS.

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[Read November 21, 1950. Published March 23, 1951]

In the year 1882 Professor V. Ball (1) published a " Catalogue of the Examples of Meteoric Falls in the Museums of Dublin." At that time the majority of the specimens listed were housed in Trinity College, very few examples being in the National Museum. To-day that condition of affairs is reversed, for in the intervening sixty-eight years many additional specimens of meteorites have been added to the collection in the latter museum, and they now include representatives of forty-two (42) falls, of which nine (9) are casts. It seems desirable, therefore, to bring Ball's catalogue up-to-date, more especially since there is a growing interest in these extra-terrestrial bodies, as witness the recent establishment of an International Commission on Meteorites, following the International Geological Congress held in London in 1948. The present catalogue includes also a minor collection in University College, Dublin, as well as specimens now in Queen's University, Belfast. There are representative examples of most of the recognized types in these collections, the chief deficiencies occurring in the Achondrite group, only four of the ten or eleven known types, being represented by specimens in Irish museums.

To the long list of authenticiated world falls, Ireland has so far contributed five which are noted below in their chronological order of fall :—

Moorsfort, Co. Tipperary	...	Aug., 1810 (2).
Limerick County (Adare)	...	Sept. 10, 1813 (3).
Killeter, Co. Tyrone	...	Apr. 29, 1844 (4).
Dundrum, Co. Tipperary	...	Sept. 12, 1865 (5).
Crumlin, Co. Antrim	...	Sept. 13, 1902 (6).

The last one mentioned has been the only addition to the Irish list since Ball's time, the original stone being now in the British Museum, and a cast thereof in the National Museum presented by the Trustees of the former institution. The fortunate discovery in 1945 of the long unknown location of the historic " Brasky " meteorite (7) and its subsequent purchase by the National Museum has resulted in the latter being now the repository of the largest and heaviest fragment of meteoritic matter hitherto known to have fallen in Britain or in Ireland. In its present condition it weighs 27,060 grams. It was accompanied in its fall in 1813 by two other masses of 17 and 24 lbs. reputed weights, the former is now in the Oxford Geological Museum, and a donated cast is in the National Museum. The present repository of the 24 lb. mass is unknown.

Since the total number of meteorites in Irish museums is small, it has been considered more suitable to list the examples in the several collections separately, while retaining a uniform grouping system for each. This grouping is the standard one which is based on chemical composition and structure. No emphasis is laid on the sequence in time of the falls, nor are their location titles arranged in alphabetical order, a system, however, eminently suitable for the large collections of some museums. The list of examples in the Trinity College museum is based essentially on Ball's 1886 catalogue, with such corrections and additions as seemed necessary following a personal inspection. The more recent additions to this collection bear no numbers as do those listed in Ball's original catalogue and repeated here. Prior's (1923) (8) catalogue of British Museum and other world meteorites, as well as Hey's supplementary catalogue (9) (1940) have been utilized for verification of the details given below respecting location and date of falls. In both these publications a bibliography of the literature relating to each fall is given, and should be consulted by those specially interested.

In March, 1949, Dr. L. J. Spencer (10), published " A list of catalogues of meteorite collections " to which this one is intended as a further addition. His list gave the titles of over one hundred catalogues dealing with collections from all parts of the world. The present catalogue contains the record of the 49 (forty-nine) falls which are represented in this country by examples having an aggregate weight of 48.667 kilograms. Ten other authenticiated falls are represented by casts, mostly in the National Museum.

I have to express here my appreciation and thanks, for permission to examine the various collections, to the authorities of the National Museum, Trinity College, and University College, Dublin, and of Queen's University, Belfast. I am also indebted especially to Dr. M. H. Hey, of the British Museum, for valuable and graciously accorded help in determining the locations of some unlabelled or incorrectly labelled specimens in some of the collections listed below.

NATIONAL MUSEUM, DUBLIN.

(*Registered Nos. in brackets and weights to the nearest half-gram*).

Siderites.

Tombigbee River, Alabama, U.S.A. Found 1859.
Nickel-poor ataxite (19). 334 grames.

Branau, Trutnov, Bohemia. Fell 1847.
Hexahedrite (1 and 2). (2 Casts).

Cañon Diablo, Coconino Co., Arizona, U.S.A. Found 1891.
Coarse octahedrite (5) 429, (6) 84, and (7) 88 grams.

Youndegin, Avon, Western Australia. Found 1884.
Coarse octahedrite (8). 216 grams.

Sarepta Saratov, Russia. Found 1854.
Coarse octahedrite (4). (Cast).
Verkhne Udinsk, Transbaikal, Siberia. Found 1854.
Medium octahedrite (10). (Cast).
Elbogen, Bohemia. Found 1811.
Medium octahedrite (11). 71 grams.
Toluca, Mexico. Found 1776. (3 specimens).
Medium octahedrite (12) 406.5, (13) 266.5, (14) 130 grams.
Sacramento Mountain, Eddy Co., New Mexico, U.S.A. Found 1896.
Medium octahedrite (15). 363 grams.
Copiapo, Atacama, Chili, S. America. Found 1863.
Brecciated octahedrite (15a). (Cast).
Boogaldi, County Baradine, N. S. Wales. Found 1900.
Fine octahedrite (16). (Cast).
Bethany (Amalia Farm), Great Namaqualand, S. Africa. Found 1836.
Fine octahedrite (17). [Cut and polished slice]. 5985 grams.
Glorieta Mountain, Santa Fe Co., New Mexico. Found 1844.
Fine octahedrite. (18). 2164.5 grams.

SIDEROLITES.

Krasnojarsk, Yeniseisk, Siberia. ("Pallas Iron"). Found 1749.
Pallasite. (31). [4 small pieces]. 38 grams.
Finmarken, Arctic Norway. Found 1902.
Pallasite (32). 390 grams.
Imlac, Desert of Atacama, Chili, S. America. Known in 1822.
Pallasite (33) 151.5 grams.
Steinbach, Erzgebirge, Saxony. Found 1724.
Siderophyre (40). 35 grams.
Estherville, Edmund County, Iowa, U.S.A. Fell 1879.
Mesosiderite (45). 32.5 grams.

AEROLITES.

Chondrites.

Moorsfort, Co. Tipperary, Ireland. Fell Aug. 1810.
Veined grey chondrite (49). 1223 grams.
(Also cast of original stone). (49a).
Shelbourne, Ontario, Canada. Fell 1904.
Veined grey chondrite (50). 39 grams.
Limerick (Adare) County, Ireland. Fell 1813. Sept. 10, 9 a.m.
Veined grey bronzite-chondrite (51) "Brasky" 27060 grams.
Cast of 17 lb. fragment (51a) and small pieces (52) 19, (52a) 5 grams.

Pultusk, Poland. Fell 1868.
Veined grey bronzite-chondrite (53) 25 grams.
Estacado, Hale County, Texas, U.S.A. Found 1883.
Crystalline bronzite-chondrite (58) [Slice]. 376.5 grams.
Forest City, Winnebago County, Iowa, U.S.A. Fell 1890.
Brecciated spherical bronzite-chondrite. (57). 19.5 grams.
Dundrum, Co. Tipperary, Ireland. Fell 1865. Aug. 12, 7 p.m.
Crystalline bronzite-chondrite. [2 casts]. (59.59a).
L'Aigle, Orne, France. Fell 1803.
Brecciated intermediate hypersthene-chondrite (62). 223 grams.
Crumlin, Co. Antrim, Ireland. Fell Sept. 13, 1932, 10.30 a.m.
Grey hypersthene-chondrite (54). (Cast).
Dhurmsala, Kangra District, Punjab, India. Fell 1860.
Intermediate hypersthene-chondrite (60). 7.5 grams.
Alfianello, Brescia, Italy. Fell 1883.
Intermediate hypersthene-chondrite (72). 169.5 grams.
Château-Renard, Loiret, France. Fell 1841.
Veined intermediate hypersthene-chondrite (63). 8.5 grams.
Berlanguillas, Burgos, Spain. Fell 1811.
Veined intermediate hypersthene-chondrite (76). 8.5 gramms.
Durala, Punjab, India. Fell 1815.
Veined intermediate hypersthene-chondrite (55). [2 casts].
Mocs, Cluj, Transylvania. Fell 1882.
Veined white hypersthene-chondrite [(56) cast], (61) 286, (64) 12½, and (65) 18 grams resp.
Bjurböle, Borgå, Finland. Fell 1899.
Spherical hypensthene chondrite (66). 87.5 grams.
Holbrook, Nevajo County, Arizona, U.S.A. Fell 1912.
Crystalline spherical hypersthene-chondrite (70). 640 grams. [57 small and 12 larger stones].
Ergheo, Brava, Somaliland, E. Africa. Fell 1889.
Crystalline hypersthene-chondrite (69). 148 grams.
Zavid, Bosnia, Yugoslavia. Fell 1897.
Brecciated grey hypersthene-chondrite (68). 70.5 grams.
Chantonnay, Vendée, France. Fell 1812.
Brecciated grey hypersthene-chondrite (67). 11.5 grams.
Waconda, Mitchell County, Kansas, U.S.A. Found 1873.
Brecciated spherical hypersthene-chondrite (71). 139 grams.
Weston, Connecticut, U.S.A. Fell 1807.
Brecciated spherical hypersthene-chondrite (75). 52.5 grams.

Achondrites.

Chassigny, nr. Langres, Haute Marne, France. Fell 1813.
Chassignite. (78). 16.5 grams.
Stannern, Iglau, Moravia, Czechoslovakia. Fell 1808.
Eucrite. (85). 263.5 grams.

GEOLOGICAL MUSEUM, TRINITY COLLEGE, DUBLIN.

(*Ball's catalogue numbers in brackets*).

SIDERITES.

Nedagolla, Vizagapatam District, Madras, India. Fell 1870.
Nickel-poor ataxite. 15 grams.
Walker County, Alabama, U.S.A. Found 1832.
Hexahedrite. (29). 10.4 grams.
Burlington, Otsego County, New York. Found before 1819.
Medium octahedrite. (28). 16.1 grams.
Rowton, near Wellington, Shropshire, England. Fell 1876.
Medium octahedrite. [Cast]. (30).
Mbosi, Rungwe district, Tanganyika, Africa. Found 1930.
Medium octahedrite. 35 grams.
Cambria (Lockport), Niagara County, New York, U.S.A. Found 1818.
Fine octahedrite. (27). 5.4 grams.

SIDEROLITES.

Estherville, Emmet County, Iowa, U.S.A. Fell 1879.
Mesosiderite. (25). 1.9 grams.
Krasnojarsk, Yeniseisk, Siberia. Found 1749.
Pallasite ("Pallas Iron"). (23) 4.4, (23a) 9.6 grams.
Steinbach (Breitenbach), Erzgebirge, Saxony. Found 1724.
Siderophyre. [Cast]. (24).

AEROLITES.

Chondrites.

Limerick (Adare) County, Ireland. Fell 1813.
Veined grey bronzite-chondrite. (9) 155, (9a) 67 grams.
Dundrum, County Tipperary, Ireland. Fell 1865.
Crystalline bronzite-chondrite. (21). 1689 grams.
L'Aigle, Orne, France. Fell 1803.
Brecciated intermediate hypersthene-chondrite. (2). 15.9 grams.
Chandakapur, Berar, Central Provinces, India. Fell 1838.
Brecciated intermediate hypersthene-chondrite. (14). 2.7 grams.
Weston, Fairfield County, Connecticut, U.S.A. Fell 1807.
Brecciated spherical hypersthene-chondrite. (3). 6.4 grams.

Cold Bokkveld, Cape Province, South Africa. Fell 1838.
Carbonaceous hypersthene-chondrite. (15). 2.7 grams.
Dhurmsala, Kangra district, Punjab, India. Fell 1860.
Intermediate hypersthene-chondrite. (19). 216.3 grams.
Benares, United Provinces, India. Fell 1798.
Spherical hypersthene-chondrite. (1). 115.9 grams.
Nanjemoy, Charles County, Maryland, U.S.A. Fell 1825.
Spherical hypersthene-chondrite. (12). 38.9 grams.
Mooresfort, Co. Tipperary, Ireland. Fell 1810.
Veined grey chondrite. [2 Casts]. (5).
Berlanguillas, Burgos, Spain. Fell 1811.
Veined intermediate hypersthene-chondrite. (7). 21.6 grams.
New Concord, Muskingum County, Ohio, U.S.A. Fell 1860.
Veined intermediate hypersthene-chondrite (18). 4.8 grams.
Forsyth, Monroe County, Georgia, U.S.A. Fell 1829.
Veined white hypersthene-chondrite. (13) 6.5 grams.

Achondrites.

Bishopville, Sumpter County, S. Carolina, U.S.A. Fell 1843.
Aubrite. 2 rps. (17) 1.9 and (176) 7.9 grams.
Chassigny, near Langres, Haute Marne, France. Fell 1815.
Chassignite. (11). 8.7 grams.
Nakhla, Abu Hommos, Alexandria, Egypt. Fell 1911.
Nakhlite. 50 grams.
Stannern, Iglau, Moravia, Czechoslovakia. Fell 1808.
Eucrite. (4). 11.7 grams.

GEOLOGICAL MUSEUM, UNIVERSITY COLLEGE, DUBLIN.

SIDERITES.

Imlac, Atacama Desert, Chili. Found 1822.
Pallasite. (1). 217.½ grams.
Magura, Arva, Czechoslovakia. Found 1840.
Coarse octahedrite. (2). 82 grams.
Cañon Diablo, Coconino County, Arizona, U..S.A. Found 1891.
Coarse octahedrite. (3). 2766 grams.
Staunton, Augusta County, Virginia, U.S.A. Found 1858.
Medium octahedrite. (4). 187¼ grams.

AEROLITES.

Pultusk, Warsaw, Poland. Fell 1868.
Veined grey bronzite-chondrite. (5) 39½ grams.
Mocs, Cluj, Transylvania. Fell 1882. (2 sps.)
Veined white hypersthene-chondrite (6). 35½ and 114½ grams.
Holbrook, Nevajo County, Arizona, U.S.A. Fell 1912.
Crystalline spherical hypersthene-chondrite. (7). 600 grams W. (12 medium and 25 small stones).

GEOLOGICAL MUSEUM, QUEEN'S UNIVERSITY, BELFAST.

SIDERITES.

Henbury, McDonnell Range, Central Australia. Found 1931.
Medium octahedrite. 16¾ grams.

AEROLITES.

Holbrook, Nevajo County, Arizona, U.S.A. Fell 1912.
Crystalline spherical hypersthene-chondrite. 34½ grams.

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No. 15

AWARD OF THE BOYLE MEDAL[1] TO PROFESSOR E. J. SHEEHY, D.Sc., F.R.C.Sc.I.

REPORT OF THE COMMITTEE OF SCIENCE AND ITS INDUSTRIAL APPLICATIONS.

THE Committee has much pleasure in recommending that the Boyle Medal for Applied Science be awarded to Professor E. J. Sheehy, D.Sc., F.R.C.Sc.I., for his work in Animal and Plant Nutrition, published in the Society's Scientific and Economic Proceedings.

Dr. Sheehy's early work was concerned primarily with problems connected with milk production, and in a number of papers he dealt with such matters as the estimation of the percentage of butter-fat and other constituents of milk, and the effect of the various elements of the diet on the quantity and quality of the milk produced.

Later he turned his attention to more general problems in animal nutrition, dealing with such matters as the stock-carrying and fattening capacity of various types of pasture, the mechanical aspects of digestive processes, and the effects of shortage of Vitamin D.

His most recent paper in the Society's Proceedings deals with joint work in co-operation with others on the estimation of the value of sea-weed (Laminaria) as an animal food.

Dr. Sheehy has also played an important part in the solution of problems connected with the deleterious effects of mineral deficiencies in soils and herbage in certain districts of Ireland, and, through his lectures and writings, has contributed greatly to the spread of the knowledge of scientific agriculture among practical farmers.

[1] The Medal was awarded by the Council on 12th October, 1950, and presented to Prof. Sheehy by the President at the stated General Meeting of the Society on 7th December, 1950.